



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,246	10/09/2003	Terumi Nakazawa	056208.52825US	7517
23911	7590	12/22/2004	EXAMINER	
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			ALSOMIRI, ISAM A	
			ART UNIT	PAPER NUMBER
			3662	

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,246

Applicant(s)

NAKAZAWA ET AL.

Examiner

Isam A Alsomiri

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 16 objected to because of the following informalities: in line 9 the limitation “said the joint” should be written -said joint-. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 16-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding claim 16, the disclosure does not describe the limitation “covering said the joint between said cap and said substrate at least with a gel”.

Regarding claim 18, the disclosure does not describe the limitation “said gel is filled into said enclosure after said juncture”.

Claims 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what is meant by the claim limitation “covering said the joint between said cap and said substrate at least with a gel” (claim 16); and “said gel is filled into said enclosure after said juncture” (claim 18).

Art Unit: 3662

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7-14, and 16-18 are rejected under 35 U.S.C. 102(b or e) as being anticipated by anyone of Schmidt et al. US 6,600,103 or Uematsu et al. US 6,130,640.

Re claims 1, 5, and 16, Schmidt discloses in figures 1-8 a vehicle-mounted millimeter wave radar device that detects objects by sending out millimeter waves, comprising: a millimeter wave generation means for generating millimeter waves; an antenna means for sending out the millimeter waves; a substrate that is provided with wiring 10 and the millimeter wave generation means; an enclosure that is joined to the substrate to enclose the millimeter wave generation means and the surrounding space on the substrate in cooperation with the substrate; and a resin that covers the joint between the enclosure and the substrate at least (see Abstract). Also, Uematsu disclose in figure 9 a vehicle-mounted millimeter wave radar device that detects objects by sending out millimeter waves, comprising: a millimeter wave generation means for generating millimeter waves 110; an antenna means 125 for sending out the millimeter waves; a substrate that is provided with wiring 10 and the millimeter wave generation means; an enclosure 150 that is joined to the substrate to enclose the millimeter wave generation means and the surrounding space on the substrate in cooperation with the substrate;

Art Unit: 3662

and a resin (see col. 12 lines 27-30) that covers the joint between the enclosure and the substrate at least (see Abstract).

Re claim 2, it is inherent to have means for preventing outflow of the resin, wherein the antenna means is provided on a surface of the substrate opposite to the surface mounting the millimeter wave generation means.

Re claims 3, 12, and 17, Uematsu teaches the space is filled with an inert gas (see col. 11 lines 42-45, col. 7 lines 45-48).

Re claims 4, 11, it's implicit that the enclosure includes means for moisture absorption (for protecting the circuits).

Re claim 7, Uematsu teaches the case is made of a conductive material; the circumference of the input/output signal terminals is made of an insulation material, and the input/output signal terminals are put through the case with the insulation material (see figures 9 and 12, Abstract).

Re claim 8, Uematsu teaches the multilayer substrate is integral with the case (see figure 9).

Re claim 9, Uematsu teaches the MMIC is provided on the multilayer substrate, and the patch antenna 125 circuit is formed by a separate member 128.

Re claim 10, Uematsu teaches the multilayer substrate is not planar structure but shaped so as to contain a space, and wherein a flat cover 150 is joined to the multilayer substrate so as to provide a hollow storage space for the MMIC (see figure 9).

Re claim 13, it's inherent the multilayer substrate is made of either an inorganic material or an organic material.

Art Unit: 3662

Re claim 14, it's inherent the hollow cap 150 and 141 and the multilayer substrate are joined by an organic material using as an adhesive.

Re claim 18. The method according to claim 16, wherein the substrate is provided with a wall that forms an enclosure, and wherein the gel is filled into the enclosure after the juncture.

Allowable Subject Matter

Claims 6 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited prior art to (Sikine et al; Shingyoji et al; Kim et al) show various MMIC modules including mounting and protection means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

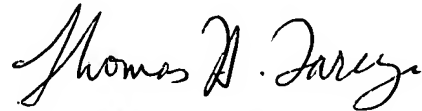
Art Unit: 3662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Isam Alsomiri



December 20, 2004



THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600